



**The Official**

# **OREGON SECTION AEG NEWSLETTER**

## **November Meeting Details**

**Date:** Tues. Nov. 16th

**Location:** Old Market Pub

**6959 SW Multnomah**

**Portland, OR**

**6:00 pm Social**

**6:45 pm Dinner**

**7:30 pm Presentation**

**Dinner: Pizza & Salad**

**\$20 Dinner (\$5 Students)**

### **Reservations:**

**mwegner@cornforthconsultants.com with "AEG Reservation" in the subject line or 971-222-2047 by 4pm Thur. Nov. 11**

**There is a \$2 surcharge for those who do not reserve by the deadline.**

### **Upcoming Meetings:**

**December - NO MEETING**  
**January - Charlie Hammond & George Machan**

**February - Yumei Wang**

**March - Bill Haneberg**

**March—Rob Witter**

**April - Student Night**

**May - TBA**

Note: NO December Meeting

Note: TWO March Meetings



## **The November Guest Speaker is Stephen from The Oregon Department of Transportation—Topic: The SW Iowa Street Viaduct Bridge Replacement Project on Interstate 5, Slope Stability in the Urban Environment**

The I-5: SW Iowa Street Viaduct Bridge Replacement Project located on Interstate 5 (I-5) one mile south of downtown Portland will replace two bridge structures and construct six retaining walls for future highway widening. This 0.85 mile segment of I-5 was originally constructed in the 1950's along an existing railroad grade through steep terrain and in soils highly susceptible to saturation-induced instability. During highway construction, the Oregon Department of Transportation (ODOT) encountered slope instability which required mitigation measures including slope re-grading, drainage systems, and rock buttresses. A total of seven landslides have been identified within the project area to include those that have occurred since the completion of highway construction.

This section of highway carries approximately 150,000 vehicles per day on three travel lanes in each direction. Due to the high traffic volumes, lane closures during construction will be restricted to nights and weekends. Traffic restrictions will require construction of a temporary detour structure, permanent tied-back retaining walls upslope of the highway, and a combination of tied-back and MSE walls down slope. Retaining wall construction will occur through existing slide mitigations.

The subsurface exploration program for the project included the installation of nine slope inclinometer tubes and attached vibrating wires at pre-determined locations upslope of the highway within the identified slide areas. Baseline data has been collected manually from the instrumentation throughout the design phase of the project. Based on the historical rates of slide movement in the project area it was determined that an Automated Data Acquisition System (ADAS) should be installed for the construction phase of the project. Six existing slope inclinometer tube and vibrating wire locations have been upgraded to ADAS and will be monitored by ODOT engineering geologists and geotechnical engineers throughout construction. The ADAS will provide real-time slope stability data in a web-based format during excavation work for the retaining walls and will notify ODOT geotechnical personnel if cumulative ground movement is detected outside of pre-determined thresholds.

This presentation will outline historical slope instability in the project area, project design elements, community outreach by ODOT, subsurface exploration logistics, ADAS design elements, and a construction update to include a presentation of ADAS data.



*“Keen observation is at  
least as necessary as  
penetrating analysis”*

*Karl Terzaghi*



## Bio: Stephen Hay, CEG

I graduated from Portland State University in 1995 with a B.S. in Geology and a B.S. in Geography. From 1995-1996, I worked as a temporary geologist for the Western Federal Lands Highway Division (WFLHD) in Vancouver, Washington. I was then employed with GeoEngineers Inc. of Durham, Oregon between 1996-1999 as a Senior Technician performing construction inspection and subsurface explorations including flood relief work for WFLHD. In 1999, I was hired as an Engineering Geologist with the Oregon Department of Transportation (ODOT). I am licensed as an Engineering Geologist in both Oregon and Washington.

## Message from the Chair

The seasons are changing and we continue with the great Oregon AEG season. We have a familiar face for this month's presentation, Stephen Hay of ODOT; please welcome Stephen.

It is very important for our membership to meet and hear from the National AEG President and Jahns Lecturer every season and this season is no different. In order to accommodate busy schedules, we will be having two Oregon AEG meetings in March 2011 and the December 2010 meeting will be skipped. The Jahns Lecturer will be presenting to us on March 2, 2011 and the National AEG President will present to us in April 2011. We will of course have our annual Student Presentation, which will be in May 2011. Thank you for your understanding in this juggling of presentations and we look forward to seeing all of you at the wonderful talks that will be heading our way in November 2010 and 2011.

Lisa Glonek  
Oregon AEG Section Chair

## GSA Annual Meeting 2010, Denver

The annual GSA meeting was a big hit this year in Denver with many sessions covering topics in environmental and engineering geology. At least a dozen folks from Oregon attended and presented at the conference. Two PSU students won awards. Serin Duplantis was awarded the Honorary Mention Arthur D. Howard Student Research Grant and Kate Mickelson won the Geology and Society Divisions award for the Best Student Presentation from the 2009 annual GSA meeting in Portland.

Reaching New Peaks  
in Geoscience





*“Keen observation is at least as necessary as penetrating analysis”*

*Karl Terzaghi*



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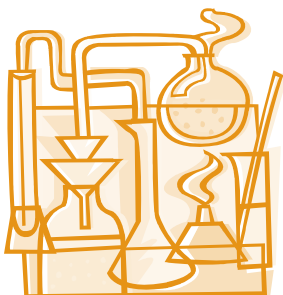
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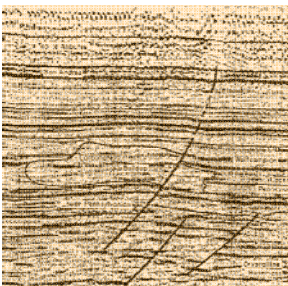
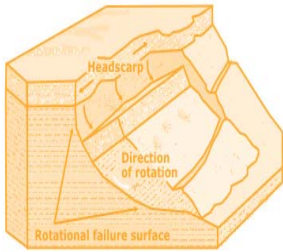
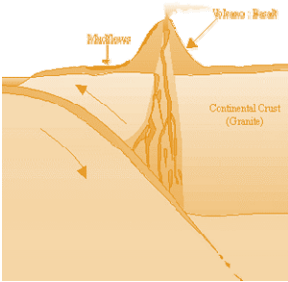
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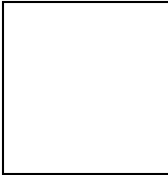
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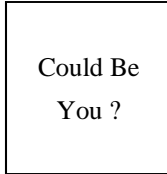
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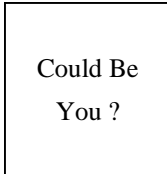
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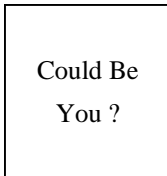
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National AEG webpage: <http://aegweb.org>

## The Oregon Section Newsletter

OREGON SECTION AEG NEWSLETTER is published monthly from September through May. Subscriptions are for members of AEG affiliated with the Oregon Section or other Sections, and other interested people who have requested and paid a local subscription fee of \$10.00. E-mail subscriptions are free. News items are invited and should be sent to: Bill Burns, OR Section AEG Newsletter Editor, Oregon Department of Geology, 800 NE Oregon Street, Portland, OR 97232, e-mail: <bill.burns@dogami.state.or.us>, phone (971) 673-1555. Electronic media is preferred. Deadline for submittal is Friday three weeks before each meeting. Advertising: business card \$100/yr; ¼ page \$200/yr; ½ page \$350/yr. Please notify Bill if you have a change to your email or mailing address.

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